

## **CLAIMS**

What is claimed is:

1. A miniature connector having on-board electronics for a thermocouple, characterized in that it comprises a module containing:

- two connection means for connecting a thermocouple to a printed circuit connecting the elements of the on-board electronics;
- three connection posts from the printed circuits to a connector supply and signal transfer cable, said signal being formed by the on-board electronics;
- means for measuring the ambient temperature in the connector disposed between the two connection means of the thermocouple;
- means for amplifying the signal supplied by the thermocouple and scaling of the signal supplied by the ambient temperature measurement means, these means also performing the summation of these two signals as well as the linearization of the signal resulting from this summation.

2. The connector according to Claim 1, characterized in that the forming means are comprised of a very low offset and very low drift differential amplifier, each of whose inputs is connected to the first and second connection means and whose output is connected via the printed circuit track to an input of a summation circuit receiving over its other input the output of a scaling circuit of the signal supplied by the output of the ambient temperature sensor, the output of the summer circuit being connected to the input of a linearization circuit, whose output is connected to one of the connection posts of the cable connection.

3. The connector according to Claim 1, characterized in that a second cable connection post is connected to a voltage regulator that supplies the on-board circuits in the connector via the tracks.

4. The connector according to Claim 1, characterized in that the module has a length of less than 30 mm, a breadth of less than 20 mm and a thickness of less than 10 mm.

5. The connector according to Claim 1, characterized in that the K-type thermocouple is comprised of a chromel alloy wire connected to an alumel alloy wire for comprising a hot junction; the connection of these two wires, respectively, to the first and second connection means with the copper of the printed circuit comprises a cold junction.